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Experience of violence perpetration and victimization in alcohol-dependent patients hospitalized for alcohol withdrawal

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ABSTRACT

Background: Alcohol use has long been associated with aggression. However, no causal relationship has been established. Few data are available on both expressed and received violence in problem drinkers or alcohol-dependent patients. This study examined the link between acute alcohol use in dependent drinkers and their experience of violent acts as assailants or victims.
Methods: Face-to-face interviews were conducted in 100 unselected heavy drinkers, admitted to hospital for planned alcohol withdrawal. Questions were directed to: (1) socio-economic status, (2) history of alcohol use, (3) family life, (4) professional events, (5) lifetime experiences of physical and psychological harm, as author or as victim, and (6) other addictive behaviors. Violence was considered when the patient considered it to be related to alcohol intake.
Results: A total of 69 males and 31 females participated in the study. Forty-six patients (46%, 32 men [46%], 14 women [45%]) reported to be victims of violent acts while they were under the influence of alcohol. Twenty-five patients (25%, 18 men [26%] and 7 women [23%]) reported to be the author of physical or sexual assaults, or thefts or robberies under the influence of alcohol. Insults to strangers were reported by 21 patients (21%, 18 men [26%], 3 women [10%]). Thirty-five patients (35%, 23 men [32%], 13 women [42%]) were detained in police custody while intoxicated.
Conclusion: In this study, received and expressed violence related to alcohol consumption was a common finding, one side of which can be evaluated through interview of hospitalized patients.

1. Introduction

Disorders associated with substance use, most notably alcohol and cocaine, and to a lesser extent marijuana, were found to be associated with violence toward others.[1,2] Hogarth's Gin Lane (1751) and other popular representations have long associated alcohol use with aggression. However, no causal relationship has been established and the interaction is considered more subtle and complex.[3,4] An alcohol-related increase in aggressive behaviors may account for the relationship between alcohol and commitment of violent crime.[5] Indeed, some studies showed that alcohol intake can trigger violent acts,[6] and the prevalence of alcohol consumption in authors of violent acts has been evaluated around 50%.[3,7] Conversely, alcohol dependence has been identified as a risk factor for being murdered[8] and heavy drinking is associated with a high risk of being assaulted with a gun[9] or to experience intimate partner violence.[10] Alcohol consumption is a risk factor for being sexually assaulted.[11,12] In a Canadian community-based study, 30% of subjects reporting to be victims of physical violence had been drinking alcohol at the time of the assault.[3] Evaluating physical assault perpetration and victimization in the US population showed that drinkers were more often exposed to violent experiences than abstainers. Drinkers were also more often victims than perpetrators of violence.[13]

It has been suggested that the importance of alcohol-related violence could depend on norms and patterns of drinking, which vary over time and from one country to another.[14,15] In France, few data are available. In 2000, the first national survey ever investigating violent situations showed that women reporting to be victims of physical or sexual assaults experienced more frequently alcohol problems than those without history of violence.[16] In another community-based study in 2007, a quarter of sexual assault perpetrators had consumed alcohol or drugs at the time of the

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assault.[17] In a series of 638 police recorded physical assaults in the Paris area, 30% of perpetrators had consumed alcohol when they committed the assault.[18] In 239 sexual assaults survivors in 2009 referred to our department of forensic medicine, we found that 55 (23%) had consumed alcohol (46), cannabis (15), tranquillizers (3), or cocaine (1) at the time of the assault.[19] Most published studies on alcohol-related violence were conducted in the general population and relevant data are scarce in patients with alcohol problems. In a population of patients attending three alcohol treatment services in London, authors focussed on alcohol addicts as victims of violence and 54% of women and 24% of men identified themselves as victims of sexual abuse or assaults.[20] A majority of participants (59%) in a US clinical trial for treatment of alcohol dependency reported that they had experienced emotional, physical or sexual abuse during their lives.[21] In one of the rare studies investigating both received and expressed physical violence in patients with addictive disorders, 59% and 49% of patients treated for substance abuse reported lifetime experience as victims or perpetrators of physical violence, respectively.[22]

In the present study, we interviewed alcohol-dependent patients hospitalized for alcohol withdrawal about their experience of violent acts both as assailants and as victims. Participants responded to questions about emotional, physical and sexual abuse.

2. Methods

2.1. Study population

The study was conducted in a specialized unit for the treatment of addictive disorders, in the Department of Internal Medicine of Fernand-Widal Hospital, Paris (France). Face-to-face interviews were conducted by one of us (CD) in 100 unselected heavy drinkers. Inclusion criteria were: (1) lifetime history of DSM-IV alcohol dependence, (2) enrollment in a three-week hospital rehabilitation treatment for planned alcohol withdrawal, and (3) the acceptance to participate in the study, after informed consent.

Information about the study was given and interviews were conducted in the first 24 h of hospital stay, at a time when the possible effects of an alcohol intake before admission could be excluded.

2.2. Questionnaire

Questions (33 items) were directed to: (1) socio-economic status, (2) history of alcohol use, (3) family life, (4) professional events, (5) experiences of physical and psychological harm, as author or as victim, and (6) other addictive behaviors.

2.3. Severity of social harm from drinking

As a basis for an index evaluating social harm from drinking, we recorded in each patient the existence of (1) domestic conflicts related to alcohol use, (2) problems at work, (3) assaults perpetrated under the influence of alcohol, (4) offences against traffic rules, and (5) verbal, physical, or sexual violence experienced while being intoxicated.

2.4. Statistical analysis

Tests of significance included Fisher's, chi-square and Student's *t* tests, as appropriate.

3. Results

3.1. Study population

A total of 69 males and 31 females participated in the study. Median age was 46 years for men (range: 26–67) and women (range: 31–67). Table 1 summarizes descriptive information regarding the study sample. Most patients (73, 73%) were living alone. A total of 61 patients (61%) were not employed at the time of the study.

The median declared age at onset of alcohol-related disorders was 29 for both men (range: 18–45) and women (range: 20–49). In 15 cases (15%; 10 men [14%], 5 women [16%]), patients could not mention an age at onset of alcohol-related disorders. Mean duration of alcohol-related disorders was 17.9 years in men (range 1–47 years, 59 cases) and 17.5 in women (range 4–47 years, 26 cases).

Social life events in male patients (37, 54%) and the need to relax or to reduce tension in female patients (9, 29%) were the initial situations of alcohol abuse most frequently reported. A majority of patients (80, 80%) had been previously hospitalized for alcoholic withdrawal (median number of hospital stays: 3; range: 0–30).

3.2. Alcohol-induced problems

We considered that events were due to alcohol intake when the patients reported them to be directly caused by alcohol consumption (Table 1).

3.2.1. Domestic conflicts

38 (38%, 29 men [42%], 9 women [29%]) reported domestic conflicts related to their alcohol consumption.

3.2.2. Problems at work

Declared problems at work, which were said to be due to alcohol, were found in 66 patients (66%, 48 men [70%], 18 women [58%]).

3.2.3. Assaults

We evaluated declared situations of violence, which were said to be due to alcohol, as follows. Thirteen patients (13%, 9 men [13%] and 4 women [13%]) reported expressed physical violence: 8 (8%, 6 men [9%], 2 women [6.5%]) with fist or head, 4 (4%, 2 men [3%], 2 women [6%]) using a knife, and 1 man [1%] using a gun. These acts of violence were mostly directed against other consumers in bars, passers-by in the street, or their partner. The age at onset of alcohol problems, the duration of alcohol problems and the number of hospital stays for alcohol withdrawal did not differ significantly between patients reporting to have perpetrated physical assaults while intoxicated and other patients (*t* test, 27.5 vs. 29.1 yrs, $P = 0.55$, 19.6 vs. 18.0, $P = 0.65$ and 7.8 vs. 4.2, $P = 0.20$, respectively).

3.2.4. Alcohol-related committed crimes

Seventeen patients (17%, 14 men [20%] and 3 women [10%]) committed thefts or robberies under the influence of alcohol. One patient (1 man) reported to be the author of an attempted sexual assault. A total of 25 patients (25% [95% confidence interval: 17–33%], 18 men [26%] and 7 women [23%]) reported to be the author of physical or sexual assaults, or thefts or robberies under the influence of alcohol (Table 2). Insults to strangers were reported by 21 patients (21%, 18 men [26%], 3 women [10%]).

3.2.5. Violence by someone else

Forty-six patients (46%, 32 men [46%], 14 women [45%]) reported to be victims of verbal, physical, or sexual violence. Among them, 18 patients (18%, 14 men [20%], 4 women [13%]) reported to

Table 1
Patients' characteristics and alcohol-associated problems.

	Males mean (SD) N (%)	Females mean (SD) N (%)	All mean (SD) N (%)
Individual characteristics			
Age	46.5 (8.6)	46.2 (8.5)	46.4 (8.6)
Marital status (%)			
Living alone	51 (74)	22 (71)	73 (73)
Married or cohabiting	18 (26)	9 (29)	27 (27)
Occupational status			
Unemployed or retired	43 (62)	18 (58)	61 (61)
Currently working	26 (38)	13 (42)	39 (39)
Situational characteristics			
Age at first alcohol intake	15.4 (4.2)	15.4 (4.2)	15.4 (4.2)
Age at onset of alcohol-related disorders	28.9 (8.0)	29 (8.0)	28.9 (8.0)
Previous hospitalizations for alcohol withdrawal	4.6 (5.7)	4.7 (5.8)	4.6 (5.7)
Lifetime alcohol-induced problems			
Domestic conflicts, *total*	*29 (42)*	*9 (29)*	*38 (38)*
Arguments	26 (38)	8 (25)	34 (34)
Split-off	24 (35)	4 (13)	28 (28)
Problems at work, *total*	*48 (70)*	*18 (58)*	*66 (66)*
Lateness	15 (22)	7 (23)	22 (22)
Repeated absences	16 (23)	9 (29)	25 (25)
Conflicts with employer	14 (20)	2 (6)	16 (16)
Occupational accident	4 (6)	0 (0)	4 (4)
Resignation	10 (14)	3 (10)	13 (13)
Assaults, *total*	*30 (43)*	*10 (32)*	*40 (40)*
Physical assault (punches, laps, or kicks)	6 (9)	2 (6)	8 (8)
Physical assault (knife or gun)	2 (3)	2 (6)	4 (4)
Sexual assaults	1 (2)	0 (0)	1 (1)
Insults	18 (26)	3 (10)	21 (21)
Thefts	14 (20)	3 (10)	17 (17)
Traffic offences, *total*	*27 (39)*	*11 (35)*	*38 (38)*
High speed	7 (10)	2 (6)	9 (9)
Driving in an alcoholic state	16 (23)	9 (29)	25 (25)
Other	1 (2)	0 (0)	1 (1)
Violence perpetrated by others, *total*	*32 (46)*	*14 (45)*	*46 (46)*
Insults	14 (20)	4 (13)	18 (18)
Thefts	21 (30)	7 (23)	28 (28)
Physical assault (bare-handed)	10 (14)	5 (16)	15 (15)
Physical assault (knife or gun)	7 (10)	2 (6)	9 (9)
Sexual assaults	1 (2)	2 (6)	3 (3)
Addictive disorders associated with alcohol dependence			
Tobacco use			
Smokers	61 (88)	29 (94)	90 (90)
Experience of withdrawal	26 (38)	7 (23)	33 (33)
No experience of withdrawal	35 (50)	22 (71)	57 (57)
Non smokers	8 (12)	2 (6)	10 (10)
Former smokers	5 (7)	0 (0)	5 (5)
No experience of smoking	3 (4)	2 (6)	5 (5)
Illicit drug use, *total*	*44(64)*	*14(45)*	*58 (58)*
Cannabis	36 (52)	10 (32)	46 (46)
Previous use	20 (29)	3(10)	23 (23)
Current use	16 (23)	7(23)	23(23)
Heroin	19 (28)	7 (23)	26 (26)
Previous use	17 (25)	7 (23)	24 (24)
Current use	2 (3)	0 (0)	2 (2)
Cocaine	20 (29)	7 (23)	27 (27)
Previous use	18 (26)	6 (20)	24 (24)
Current use	2 (3)	1 (3)	3 (3)
Amphetamines	7 (10)	4 (10)	11 (11)
Previous use	7 (10)	4 (10)	11 (11)
Current use	0 (0)	0(0)	0 (0)
LSD	8 (12)	2 (6)	10 (10)
Previous use	8 (12)	2 (6)	10 (10)
Current use	0 (0)	0 (0)	0 (0)
Psychotropic drug use[a]			
Benzodiazepines	29 (42)	16 (52)	45 (45)
Antidepressants	7 (10)	5 (16)	12 (12)
Buprenorphine	4 (6)	1 (3)	5 (5)
Methadone	2 (3)	2 (6)	4 (4)
Codeine	1 (2)	1 (3)	2 (2)
None	34 (49)	9 (29)	43 (43)

Numbers indicate absolute values or mean numbers, numbers in brackets indicate percentages or standard deviations.
[a] Prior admission.

Table 2
Received and expressed physical violence.

	Received violence	No received violence	Total (M/F)[a]
	N (M/F)[a]	*N* (M/F)[a]	
Expressed violence	15 (10/5)	10 (8/2)	25 (18/7)
No expressed violence	24 (17/7)	51 (34/17)	75 (51/24)
Total (M/F)[a]	39 (27/12)	61 (42/19)	100 (69/31)

[a] N: number of patients; M/F: male/female.

be insulted in the street. For most aggressions (26 of 46, 56%), victims did not alert the police. Of the 20 patients who told the police about the assault, 17 (85%) had no information about the issue of the complaint. In 2 cases, assailants were put in police custody, and 1 was sent to jail.

Twenty-eight patients (28%, 21 men [30%], 7 women [23%]) reported to be victims of purse or cell phone snatching. Nine patients (9%, 7 men [10%], 2 women [6%]) had been previously threatened with or wounded by a knife (7) or a gun (2). Fifteen patients (15%, 10 men [14%], 5 women [16%]) had been hit or beaten while being drunk. In most cases, such violent situations occurred during brawls in the bars, or during attempted theft. Two women [6%] and 1 man [1%] reported a sexual assault. A total of 39 patients (39% [95% confidence interval: 29–49%], 27 men [39%], 12 women [39%]), reported physical or sexual violence (Table 2).

Victims of physical violence while intoxicated reported a younger age at onset of alcohol problems, a longer duration of alcohol problems, and a higher number of hospital stays for alcohol withdrawal than other patients (*t* test, 24.6 vs. 29.8 yrs, $P = 0.02$, 23.6 vs. 17.0 yrs, $P = 0.03$, and 7.0 vs. 3.9 stays, $P < 0.05$). Assaults inflicted by others were more frequent in cannabis smokers ($P < 0.01$) and former consumers of cocaine, heroin, amphetamines, or LSD ($P = 0.05$, $P = 0.05$, $P < 0.01$, and $P = 0.06$, respectively) (Table 3).

3.2.6. Traffic offences

35 patients (24 men [35%] and 11 women [35%]) had previously committed an offence on the road while being intoxicated. A total of 29 of these 35 patients (83%) reported to be held at least once in police custody.

3.2.7. Police recorded consequences of alcohol-induced problems

Thirty-five patients (35%, 23 men [32%], 13 women [42%]) were detained in police custody while intoxicated.

3.2.8. Severity of psychosocial alcohol-induced problems

In each patient, we recorded how many of five psychosocial domains were affected, namely domestic conflicts, problems at work, traffic offences, assaults, and violence by someone else. Mean numbers were similar in male and female patients (2.2 vs. 1.8, *t* test: $P = 0.19$). A total of 6 men (9%) and 6 women (19%) did not report any psychosocial problem, while 5 men (7%) and 1 woman (3%) reported all five domains to be affected.

3.3. Associated addictive disorders (Table 1)

3.3.1. Tobacco

Ninety patients (90%, 61 men [88%], 29 women [93%]) smoked cigarettes, 10 (10%, 8 men [11%] and 2 women [6%]) did not.

3.3.2. Illicit drugs

A total of 58 patients (58%) reported lifetime illicit drug use and 28 (28%) were still consumers at the time of the study. Experience of illicit drug use included cannabis (46 patients [46%], 36 men

Table 3
Individual characteristics, multiple drug use and physical assaults.

	Perpetrator of physical assault OR[a] [CI][b]	Victim of physical assault OR[a] [CI][b]
Marital status		
Living alone	1.00	1.00
Married or cohabiting	1.24 [0.29–5.02]	1.15 [0.36–3.75]
Occupational status		
Unemployed or retired	1.00	1.00
Currently working	0.66 [0.16–2.61]	1.38 [0.48–4.04]
Cannabis use		
Non-user	1.00	1.00
Consumers	0.20 [0.01–171]	**5.16[d] [1.44–19.09]**
Former consumers	0.42 [0.06–2.34]	2.94 [0.77–11.33]
Cocaine consumption		
Non-consumers	1.00	1.00
Consumers	0.00 [0.00–16.85]	0.00 [0.00–10.77]
Former consumers	0.90 [0.18–4.06]	3.01 [0.99–9.19]
Heroin consumption		
Non-consumers	1.00	1.00
Consumers	0.00 [0.00–30.50]	0.00 [0.00–19.61]
Former consumers	0.91 [0.18–4.13]	**3.06[c] [1.01–9.34]**
Amphetamines consumption		
Non-consumers	1.00	1.00
Consumers	–	–
Former consumers	**8.44[d] [1.73–42.31]**	**7.41[d] [1.68–34.81]**
BZD Consumption		
Non-consumers	1.00	1.00
Consumers	0.22 [0.03–1.17]	1.58 [0.56–4.47]
LSD consumption		
Non-consumers	1.00	1.00
Former consumers	3.43 [0.59–18.64]	3.74 [0.82–17.09]

[a] OR = odds ratio.
[b] CI = confidence interval.
[c] Values in bold are significant ($p < 0.05$) based on a 95% CI that does not bound 1.0.
[d] Values in bold are significant ($p < 0.01$) based on a 95% CI that does not bound 1.0.

[52%], 10 women [32%]), heroin (26 patients [26%], 19 men [28%], 7 women [23%]), cocaine (27 patients [27%], 20 men [29%], 7 women [23%]), ecstasy or amphetamines (11 patients [11%], 7 men [10%], 4 women [13%]), and LSD (10 patients [10%], 8 men [12%], 2 women [6%]).

3.3.3. Psychotropic drug use

The most common medications taken in the days preceding admission were benzodiazepines, which affected 45 patients (45%).

4. Discussion

The results presented here showed that 39% of alcohol-dependent patients reported lifetime received physical violence, including sexual violence, while 25% reported expressed physical violence. Violence was considered when the patient considered it to be related to alcohol intake. Assaults inflicted by others were more frequent in addicts to both alcohol and cannabis than to alcohol alone.

An important feature of this study was the homogeneity of the study sample, characterized by the severity of alcohol problems: 80% were previously hospitalized for alcohol problems, while in a similar study, nearly half (53%) of the patients had been treated previously, and the other half had not been treated.[21] Although gender-based differences have been repeatedly observed in drinking patterns,[15] we found similar results in men and women in both patients' characteristics, alcohol-related social disorders, and received or expressed violence.

Lifetime abuse due to alcohol, whatever its form, was reported by 46% of patients in this study, a rate similar to the 59% observed in the Project MATCH trial, a study where patients from a clinical trial for treatment of alcohol dependency were asked about lifetime abuse, related to alcohol intake or not.[21] In the US population, data collected from the 1990 National Alcohol Survey showed that 3% of persons had perpetrated a physical assault and 4% had been victim of a physical assault sometime after the age of 12 while they had been drinking, while half of all violent incidents reported involved alcohol use by the victim or the perpetrator.[13]

In our study, the proportion of patients who reported committing an assault while intoxicated and which they consider to be due to alcohol intake was lower than the proportion of patients reporting received violence. In the study by Walton et al.,[22] in which patients completed questionnaires, proportions of declared lifetime received and expressed physical violence were similar. The difference observed here can reflect a real phenomenon. However, the present study was based on face-to-face interviews, which could induce underreporting of self-committed assaults in patients reluctant to report criminal acts to a physician.

Sexual abuse is another area where underreporting is a common finding.[16] In a questionnaire-based study focusing on sexual abuse in people with alcohol problems, 7% of patients reported having consumed alcohol at the time of the assault.[20] In the present study, the low rate of 3% of sexual assault victims might be related to a more difficult disclosure by an interview than by anonymous questionnaires.

Analysis of past illicit drug use showed that assaults inflicted by others were more frequent in cannabis smokers. No difference was found for the small numbers of patients who consumed illicit drugs other than cannabis. In a study conducted in South African adolescents, marijuana users reported more frequent victimization than non users.[23] In France, a study conducted in 10,000 persons aged 18–75 showed in young adults aged 18–34 years who reported having been assaulted, a higher prevalence of substance use, including cannabis.[24]

In this study, we collected data on detention in police custody, which can be a traumatic and humiliating event in alcohol-dependent patients. Indeed, the experience of police custody was common in both men and women and affected more than a third of all patients included. Guidelines on medical interventions in police custody suggest that physicians should pay particular attention to alcohol-dependent detainees.[25]

Some limitations of the study should be mentioned. First, the study relied on retrospective self-report lifetime information, which does not allow to infer causal relationships. Since no corroborating evidence was sought for reported violence or judicial consequences, we have no guarantee that reports are accurate. However, patient self-reports of alcohol consequences are usually concordant with collateral reports.[26] Second, the use of illicit substance was measured in each patient, but its possible role as a cofactor in a given conflict incident could not be analyzed. Third, physical violence was measured, whether or not it resulted in injury. Indeed, we mainly considered the aggressive intentions of the assailant, rather than evaluated the consequences of assaults. Fourth, this study focussed on violence related to acute alcohol intoxication. The effects of chronic alcohol intake on both committed and inflicted assaults, domestic conflicts and problems at work were not taken into account. The extent to which alcohol intake is involved in interpersonal violence may be therefore underestimated in the patients studied.

We conclude that received and expressed violence related to alcohol consumption is a common finding in alcohol-dependent patients, one side of which can be evaluated through interview of hospitalized patients. The context of alcohol consumption at the time of assaults might be an important factor of both expressed and received violence and can be a focus of future research.

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None declared.

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